

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed November 22, 2006. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

1. Response to Rejection of Claims under 35 U.S.C. §102

Claims 9, 10, and 12-16 have been rejected under 35 U.S.C. §102(b) as being anticipated by DE 4138468. Applicants respectfully traverse this rejection.

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed subject matter must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(b). In the present case, not every feature of the claimed subject matter is represented in the DE 4138468 reference. Applicants discuss the DE 4138468 reference and Applicants' claims in the following.

a. Claim 9

As provided in independent claim 9, Applicants claim:

An apparatus comprising:

at least one laser source that supplies a laser beam to operate on a substrate at a laser interaction zone to form a feature in the substrate;

a first nozzle oriented to deliver liquid along a first liquid supply path to the feature, so that the liquid is delivered to the laser interaction zone; and,

at least a second different nozzle oriented to deliver liquid to the laser interaction zone along a second different liquid supply path, ***wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate.***

(Emphasis added).

Applicants respectfully submit that independent claim 9 is allowable for at least the reason that DE 4138468 does not disclose, teach, or suggest at

least "wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate," as recited and emphasized above in claim 9.

Rather, DE 4138468 teaches that a spray unit 10 directs liquid and gas into the path of a laser beam 18, as shown in the figure accompanying the abstract. Further, the abstract states that there is "constant spraying of the work area." Thus, DE 4138468 does not teach or suggest "wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate," as recited in claim 9.

Thus, claim 9 is not anticipated by DE 4138468, and the rejection should be withdrawn.

b. Claims 10 and 12-16

Because independent claim 9 is allowable over the cited art of record, dependent claims 10 and 12-16 (which depend from independent claim 9) are allowable as a matter of law for at least the reason that the dependent claims 10 and 12-16 contain all the features of independent claim 9. For at least this reason, the rejections of claims 10 and 12-16 should be withdrawn.

Additionally and notwithstanding the foregoing allowability of claims 10 and 12-16, these claims recite further features and/or combinations of features (as is apparent by examination of the claim itself) that are patentably distinct from the cited art of record. Hence, there are other reasons why these dependent claims are allowable.

2. Response to Rejections of Claims Under 35 U.S.C. §103

In the Office Action, claims 14-16 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over DE 4138468 in view of WO 03028943 A1 and claims 9-16 stand rejected as allegedly being unpatentable over DE 4138468 in view of *Terada* (U.S. Patent Application Publication No. 2004/0197433 A1).

It is well-established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the

cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

a. Claims 14-16

Applicants respectfully traverse the rejection of claims 14-16 based on the proposed combination of DE 4138468 in view of WO 03028943 A1.

For at least the reasons given above, claim 9 is allowable over the cited art of record. Since claims 14-16 depend from claim 9 and recite additional features, claims 14-16 are allowable as a matter of law over the cited art. Further, WO 03028943 A1 discloses the use of only one spray nozzle and not a first and a second different nozzle as described in the claim. Therefore, WO 03028943 A1 does not help to cure the deficiencies of the DE 4138468 reference.

b. Claims 9-16

Applicants respectfully traverse the rejection of claims 9-16 based on the proposed combination of DE 4138468 in view of *Terada*.

Applicants respectfully submit that independent claim 9 is allowable for at least the reason that DE 4138468 does not disclose, teach, or suggest at least "wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate," as recited and emphasized above in claim 9.

For example, DE 4138468 teaches that a spray unit 10 directs liquid and gas into the path of a laser beam 18, as shown in the figure accompanying the abstract. Further, the abstract states that there is "constant spraying of the work area." Thus, DE 4138468 does not teach or suggest "wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate," as recited in claim 9.

Further, *Terada* describes that water is emitted from second nozzles at a flow velocity that is slower than water emitted from a first nozzle. The

difference in pressure between the flow velocities causes resist removed from a wafer to be removed within the flow of water from the first nozzle sandwiched between the flows of water from the second nozzles. See para. 0170. As such, in *Terada*, the first and second nozzles are directed towards the same location and are not shown to be selectively activated based upon the location of the laser interaction zone in the substrate. In particular, *Terada* discloses a fixed laser interaction zone (e.g., area near the alignment mark on the substrate) that is not variable, so activation of a first or second nozzle is not based on the location of the interaction zone in *Terada*. Therefore, *Terada* fails to teach or suggest "wherein the first nozzle and at least the second different nozzle are selectively activated based upon the location of the laser interaction zone in the substrate," as recited in claim 9.

Accordingly, a *prima facie* case establishing an obviousness rejection by DE 4138468 in view of *Terada* has not been made. Thus, claim 9 is not obvious under proposed combination and the rejection should be withdrawn. Since claims 10-16 depend from claim 9 and recite additional features, claims 10-16 are allowable as a matter of law over the cited art.

For example, claim 11 recites "wherein the controller is configured to shut-off the flow of liquid from the first nozzle to allow the at least a second nozzle to deliver liquid to the laser interaction zone by reducing potential interference caused by intersection of streams of liquid from the first nozzle and the at least a second nozzle" and *Terada* diversely discloses that flows from first and second nozzles are emitted at the same time and in the same location to create a pressure difference. For at least this reason, DE 4138468 in view of *Terada* fails to disclose that a flow of liquid from a first nozzle is shut-off to allow delivery of liquid from a second nozzle by reducing potential interference from streams from different nozzles, as described in claim 11. In direct contrast, *Terada* intentionally causes interference from different streams.

Withdrawal of the rejections is respectfully requested.

CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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